

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: Cambrian Management LTD
Well Name/Number: #1 Clark 27
Location: NW SW Section 27 T37N R1E
County: Toole, MT; **Field (or Wildcat)** Wildcat (Police Coulee area)

Air Quality

(possible concerns)

Long drilling time: No, 8 to 12 days drilling time.

Unusually deep drilling (high horsepower rig): No, single derrick drilling rig to drill to 5100' TD, in the Madison Formation.

Possible H₂S gas production: Slight H₂S gas in the Madison Formation.

In/near Class I air quality area: No, Class I air quality area nearby.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☒ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: No special concerns – using small rig to drill to 5100' TD. If there are existing pipeline for gas in the area then gas must be tied into system or if no gas gathering system nearby or a small quantity of associated gas, gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater+ freshwater mud system..

High water table: Possible high water table anticipated in the area of review.

Surface drainage leads to live water: No, but sited downstream of stock dam

Water well contamination: No, --no waters wells in the area Surface casing will be set and cemented from 400'.

Porous/permeable soils: No..

Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:

☒ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: _____

Comments: 400' of surface casing cemented to surface adequate to protect freshwater zones (rule 36.22.1001). Also, reserve pit will be lined due to proximity to stock dam and drainage below dam.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, stream crossings.

High erosion potential: No, small cut, up to 8.1' and small fill, up to 6.2', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 150'X240' location size required.

Damage to improvements: Slight, private grassland.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Access will be over existing county roads. Location immediately adjacent to Coal Mine Road. Cuttings will be buried in and unlined earthen pit. Drilling fluids if used will be allowed to dry in the pit. Pits will be backfilled after drying. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about 3/8 mile to the northwest.

Possibility of H₂S: Slight amount of H₂S possible from the Madison Formation.

Size of rig/length of drilling time: Small drilling rig/short drilling time

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H₂S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing cemented to surface (400') and operational BOP should mitigate any concerns, 3000 psi Regan Torus BOP (BOP 3,000 psig annular) rule 36.22.1014. No concern.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Species identified as threatened by the USFWS is the Black-footed Ferret. Species listed as candidate specie is the Sprague's Pipit. NH tracker website for this Township and Range lists zero (0) species of concern.

Mitigation:

- ☐ Avoidance (topographic tolerance/exception)
- ☐ Other agency review (DFWP, federal agencies, DSL)
- ☐ Screening/fencing of pits, drillsite
- ☐ Other: _____

Comments: Private surface grazing land. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified

Mitigation

- ☐ avoidance (topographic tolerance, location exception)
- ☐ other agency review (SHPO, DSL, federal agencies)
- ☐ Other: _____

Comments: Private surface cultivated. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

- ☐ Substantial effect on tax base
- ☐ Create demand for new governmental services
- ☐ Population increase or relocation

Comments: No concerns. Well is a wildcat oil well adjacent to the Police Coulee gas Field.

Remarks or Special Concerns for this site

Well is a 5100' Sunburst Formation test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur, but can be mitigated.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): \s\Thomas Richmond
(title:) Administrator
Date: Aug 29, 2013

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Toole County water wells.
(subject discussed)
Aug 29, 2013
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Toole County
(subject discussed)
March 29, 2013 for well in area
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T34N R3W
(subject discussed)
March 29, 2013 for another well in the area
(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____